

# Neural Networks

©2016 Fjodor van Veen - asimovinstitute.org

Backfed Input Cell

Input Cell

Noisy Input Cell

Hidden Cell

Probabilistic Hidden Cell

Spiking Hidden Cell

Output Cell

Match Input Output Cell

Recurrent Cell

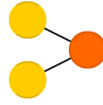
Memory Cell

Different Memory Cell

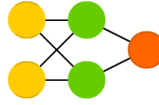
Kernel

Convolution or Pool

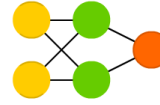
Perceptron (P)



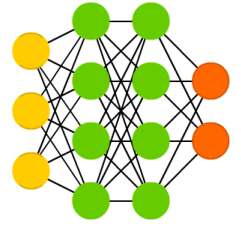
Feed Forward (FF)



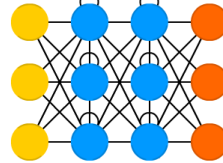
Radial Basis Network (RBF)



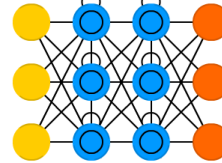
Deep Feed Forward (DFF)



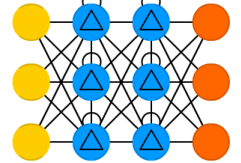
Recurrent Neural Network (RNN)



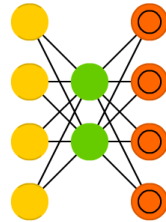
Long / Short Term Memory (LSTM)



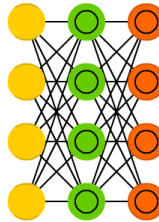
Gated Recurrent Unit (GRU)



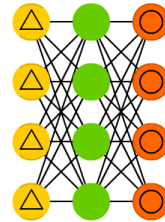
Auto Encoder (AE)



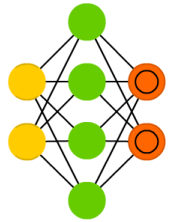
Variational AE (VAE)



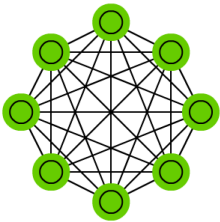
Denosing AE (DAE)



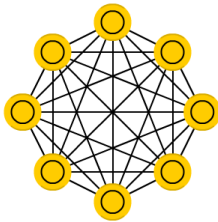
Sparse AE (SAE)



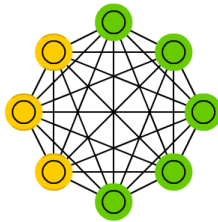
Markov Chain (MC)



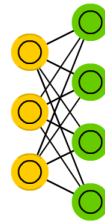
Hopfield Network (HN)



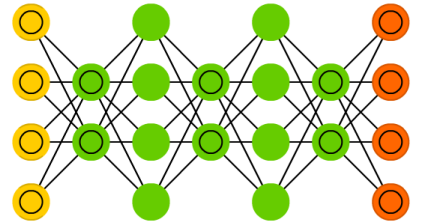
Boltzmann Machine (BM)



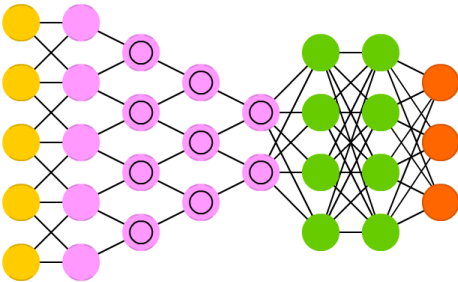
Restricted BM (RBM)



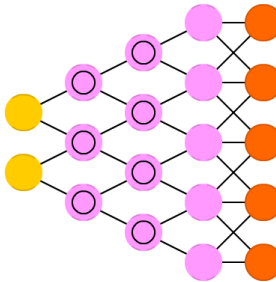
Deep Belief Network (DBN)



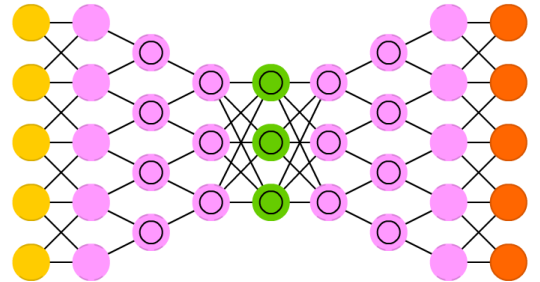
Deep Convolutional Network (DCN)



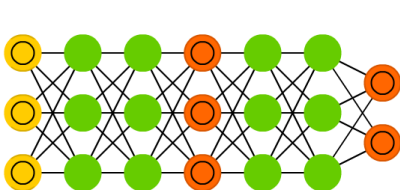
Deconvolutional Network (DN)



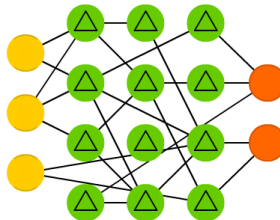
Deep Convolutional Inverse Graphics Network (DCIGN)



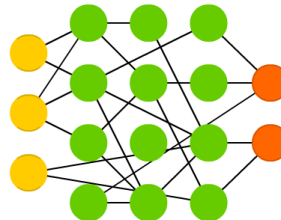
Generative Adversarial Network (GAN)



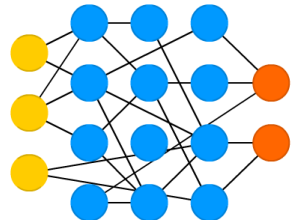
Liquid State Machine (LSM)



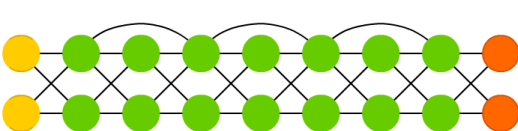
Extreme Learning Machine (ELM)



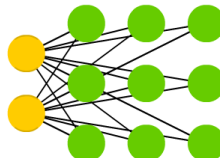
Echo State Network (ESN)



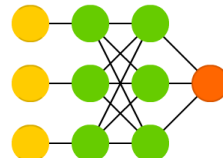
Deep Residual Network (DRN)



Kohonen Network (KN)



Support Vector Machine (SVM)



Neural Turing Machine (NTM)

